BRYUM, Abram Isayevich, inzh.; VORONOV, Petr Andreyevich, dotsent, kand. tekhn.nauk [deceased]; GINSBARG, Ruvin Izrailevich, kand.tekhn.nauk; KUTEYNIKOV, Aleksandr Nikolayevich, inzh.; FEDOROV, Aleksandr Timofeyevich, prof. [deceased]; SHAPOVALOV, Petr Borisovich, inzh.; SHIKHIYEV, Fuad Maksimovich, dotsent, kand.tekhn.nauk; KAVLENSKIY, S.D., retsenzent; KRUGLENKO, N.K., retsenzent; MATLIN, G.M., kand. tekhn.nauk, red.; KSENOFONTOVA, Ye.F., red.izd-va; TIKHONOVA, Ye.A., tekhn.red.

[Sea ports and harbor facilities] Morskie porty i portovye sooruzheniia. Moskva, Izd-vo "Morskoi transport," 1959. 519 p. (MIRA 12:12)

(Harbors)

YAVLENSKIY, S.D.

VISHNEPOL'SKIY, S.A., kand. ekon. nauk; BAYEV, S.M., inzh. putey soobshcheniya; BONDARENKO, V.S.; RODIN, Ye.D.; CHUVLEV, V.P.; TURETSKIY, L.S.; SMIRNOV, G.S.; SHAPIROVSKIY, D.B.; OBERMEYSTER, A.M.; SINITSIN, M.T.; KOGAN, N.D.; PETRUCHIK, V.A.; GRUNIN, A.G.; KOLESNIKOV, V.G.; MARTIROSOV, A.Ye.; KROTKIY, I.B.[deceased]; ZENEVICH, G.B.; MEZENTSEV, G.A.; KOLOMOYTSEV, V.P., kand. tekhn. nauk; ZAMAKHOVSKAYA, A.G., kand. tekhn. nauk; MAKAL'SKIY, I.I., kand. ekon. nauk; CHILIKIN, Ya.A.; MITROFANOV, V.F., kand. ekon. nauk; BAKAYEV, V.G., doktor tekhn. nauk, red. Prinimali uchastiye: DZHAVAD, Yu.Kh., red.; GUBERMAN, R.L., kand. ekon. nauk, red.; RYABCHIKOV, P.A., red.; YAVLENSKIY, S.D., red.; BAYRASHEVSKIY, A.M., kand. tekhn. nauk, red.; POLYUSHKIN, V.A., red.; BALANDIN, G.I., red.; ZOTOV, D.K., red.; RYZHOV, V.Ye., red.; BOL'SHAKOV, A.N., red.; VUL'FSON, M.S., kand. ekon. nauk, red.; DMITRIYEV, V.I., kand. ekon. nauk, red.; ALEKSANDROV, L.A., red.; LAVRENOVA, N.B., tekhn. red.

[Transportation in the U.S.S.R.; marine transportation] Transport SSSR; morskoi transport. Moskva, Izd-vo "Morskoi transport," 1961. 759 p. (MIRA 15:2)

(Merchant marine)

GNATKOV, Mikhail Andreyevich, kand. tekhn. nauk; YAVLENSKIY, S.D., red.

[Comprehensive development of the merchant marine and ports; technical and economic bases for determining the optimal size of vessels and port elements] Kompleksnoe razvitie morskogo flota i portov; tekhniko-ekonomicheskie obosnovaniia optimal'nykh razmerov sudov i elementov portov. Moskva, transport, 1965. 66 p. (MIRA 18:8)

Card 1/4

Card 2/4

YAVLINSKIY, M.D.

GLUZMAN, M. KH; DASHEVSKAYA, B. I; YAVLINSKIY, M. D.

Preparation of pyrimidine from mother liquor. Med. promyshl. SSSR no.2:29-34 Mar-Apr 1952. (CLML 22:2)

1. Khar'kov Scientific-Research Pharmaceutic Chemistry Institute.

YAVLINSKIY, M.D.

Pyridine chlorophenylate and its derivatives. N. E.
Grigor'eva and M. D. Yavlinskii (Kharkov State Univ.).
Ukrain. Khim. Zhur. 18, 83-8(1952)(in Russian).—Heating
30 g. 2,4-dinitrophenylpyridinium chloride and 30 g. $PhNH_2$
in EtOH until the test for unreacted dye became neg., fol-
lowed by distn. of most EtOH gave a ppt. of dinitroaniline,
which was sepd. The filtrate was dild. with acidified H_2O,
decolorized, concd., and the residue treated with concd. aq.
$HgCl_2$, yielding a complex of $HgCl_2$, m. 145-6°. This
treated in aq. soln. with H_2S, filtered, decolorized, and concd.
gave 50-60% *pyridine-PhCl* (I), m. 101-2°, after drying at
60-70°. This (3 g.) in 10 ml. H_2O treated dropwise with
20% KOH and concd. K ferricyanide gave only a trace of
1-phenylpyridone, since the isomerization of the pseudobase
into a compd. with red color (opening of the ring) proceeds
more rapidly than oxidation to the pyridone; the formation
of the pyridone was proved by its transformation into *2-pico-*
line-PhCl, whose *$HgCl_2$ complex*, m. 158-9°, and *picrate*, m.
114°. I with concd. aq. KOH gave a red ppt., $C_{11}H_{11}NO$,
m. 171-2 (from EtOH), m. 168° (from Me_2CO), which is
probably *PhNHCH:CHCH:CHCHO*. Heating 3 g. 2,4-
dinitrophenylpyridinium chloride with 2.3 g. p-$H_2NC_6H_4OH$
in pyridine at 100° and treatment of the unfilterable mixt.
with Me_2CO gave 80% violet dye, m. 158-9°, absorption
max. 510 mμ. This heated with alc. HCl 2 hrs. became
colorless and with $HgCl_2$ gave 20% of a *$HgCl_2$ complex*, m.
140-1°, identified as the *(hydroxyphenyl)pyridinium chloride*
complex. Treatment with H_2S gave 25-30% free *quaternary salt*
(II), colorless, m. 215-18° (from H_2O). If the prepn. is
originally run until a complete decompn. of the dye takes
place a 70-3% yield is obtained. II forms a *$FeCl_3$ salt*,
brown, m. 211° (decompn.; from H_2O); II *dipicrate*, m.
193°. II with alkali yields the *pseudobase*, golden yellow,
m. 130° (from H_2O). Heating 2,4-dinitrophenylpyridinium
chloride with p-anisidine in pyridine 10 min. similarly gave
(p-methoxyphenyl)pyridinium chloride, m. 137°; *$FeCl_3$ salt*,
decomp. 111°; *picrate*, m. 168°; *pseudobase*, red., m. 165-6°.
The use of phenetidine similarly gave 65-9% *(p-ethoxy-*
phenyl)pyridinium chloride, m. 70° (from H_2O); *$HgCl_2$ salt*,
m. 133-4°; *$FeCl_3$ salt*, m. 73° (from AcOH); *picrate*, m.
188-9°; *pseudobase*, m. 175°. G. M. Kosolapoff

YAVLINSKIY, I.

USSR.

Vapor-phase nitration of paraffins. B. N. Ermolenko, N. K. Man'kovskaya, and M. D. Yavlinskii. Zhurn. Khim. Zhur. 20, 57-62(1954)(in Russian).—Nitration with 67% HNO_3 at 330-50° of a hydrocarbon mixt. composed of 31.2% naphthenic, 72.8% paraffinic, and 3.2% aromatic hydrocarbons as detd. by the aniline point, with an average C no. of 9 yielded 65% nitro products in one cycle. The sepd. and vacuum distd. nitro products contained 90% mononitro compds. and consisted of approx. 20% primary, 40% secondary, and 40% tertiary nitro derivs. The starting hydrocarbon mixt. was a Grozny paraffinic ligroine, directly distd., b. 95-150°, sp. gr. 0.746, av. mol. wt. (cryoscopic in C_6H_6) 129.7. The mole ratio of hydrocarbon to HNO_3 in the mixt. fed was varied between 6.5-0.8, and the contact time 2.8-0.1 sec., bath temp. 330°. For highest yield HNO_3/ligroine ratio should be approx. 1:1 and the contact time 4-5 sec., depending on feed rate and temp. Increased contact time initiates intense reoxidation, bath temp. of 310° or 410° lowers yield, 330-350° being optimal. The nitrated products were sepd. by extracting 5 times with anhyd. MeOH, and unused ligroine recycled. The sepd. nitro compds. had an av. mol. wt. of 176.8 and contained 6.0-6.6% N.

Clayton F. Holoway

YAVLINSKIY, M. D.

Separation of lanolin from wool fat. M. Kh. Ghazman, D. I. Dushevskaya, and M. D. Yavlinskii (Sci. Research Chem.-Pharm. Inst., Kharkov). *Maslobaino-Zhirovaya Prom.* 20, No. 4, 22–6(1955).—The method is based on an observation that yield (I) of lanolin is detd. primarily by the neutralization procedure employed, and that I is increased from 34–39 to 51–66.7% when a 2-stage neutralization process (II) is used. II is described as follows: crude lanolin, sepd. from wool fat after treatment with Berthollet salt and H_2SO_4, is treated with 0.5% calcined soda, boiled in 1% H_2SO_4, and centrifuged. The free fatty acids in lanolin are then neutralized with 20–5% NaOH soln. and dry calcined soda. After the addn. of alc., the resulting mass is heated, sepd., and the lanolin is washed free of soap, treated with infusorial earth, and filtered prior to storage.

Vladimir N. Krukovsky

KHARAG, I.M.; YAVLINSKIY, M.D.; SAVIN, B.M.

Improved butamide synthesis. Med. prom. 16 no.2:39-43 F '62.
(MIRA 15:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy endokrinologii.

(UREA)

GENES, S.G.; PLAVSKAYA, A.A.; SAVIN, B.M.; YAVLINSKIY, M.D.

Hypoglycemic activity of N-benzenesulfonyl-N[1]-isopropylurea and N-benzenesulfonyl-N[1]-p-butylurea. Farm. i tok. 28 no.1:91-92 Ja-F '65. (MIRA 18:12)

1. Ukrainskiy institut eksperimental'noy endokrinologii i Zavod endokrinnykh preparatov, Khar'kov. Submitted July 29, 1963.

YAVLINSKIY, Natan Aronovich 1964

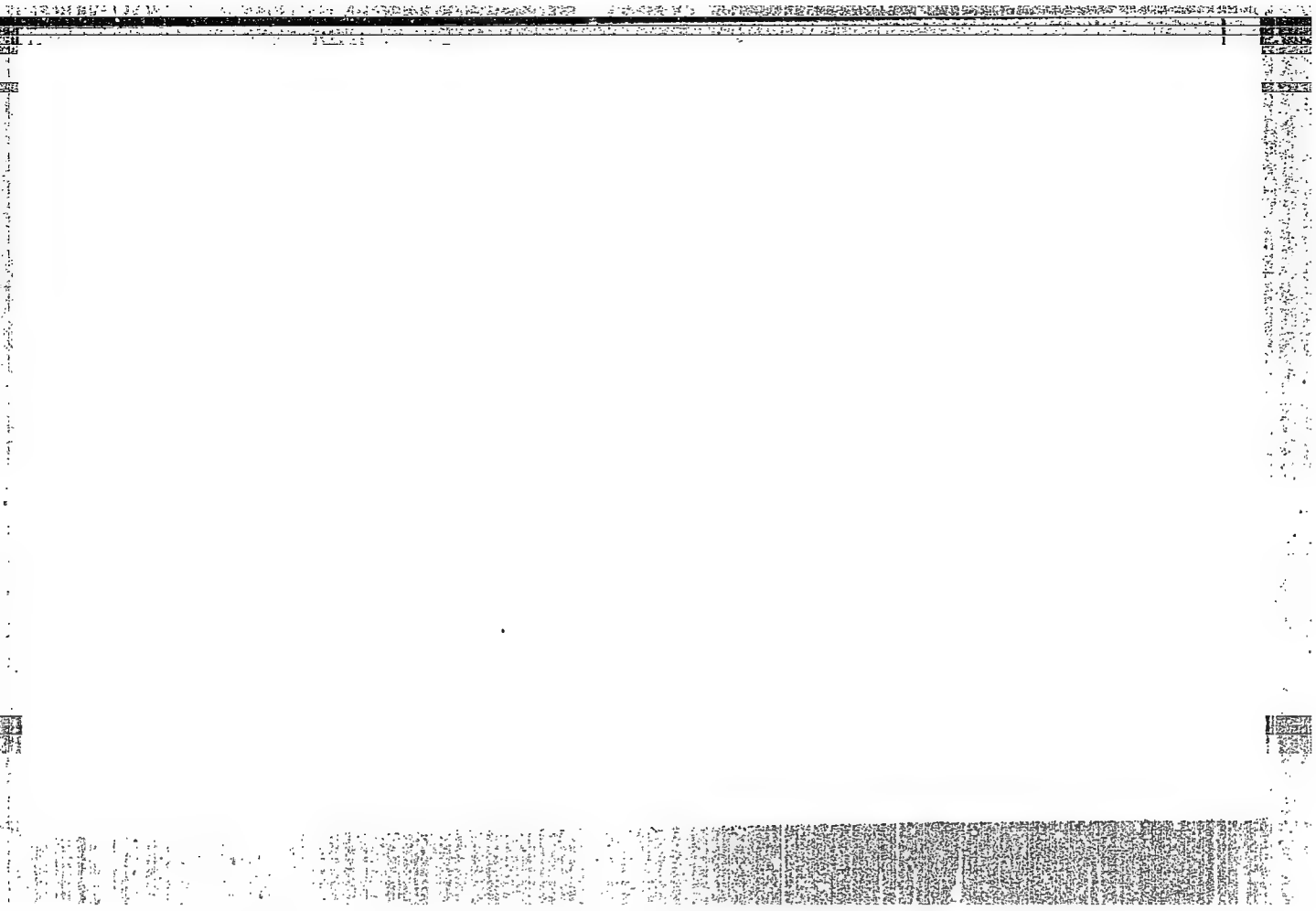
MAGNETIC FIELDS

DECEASED

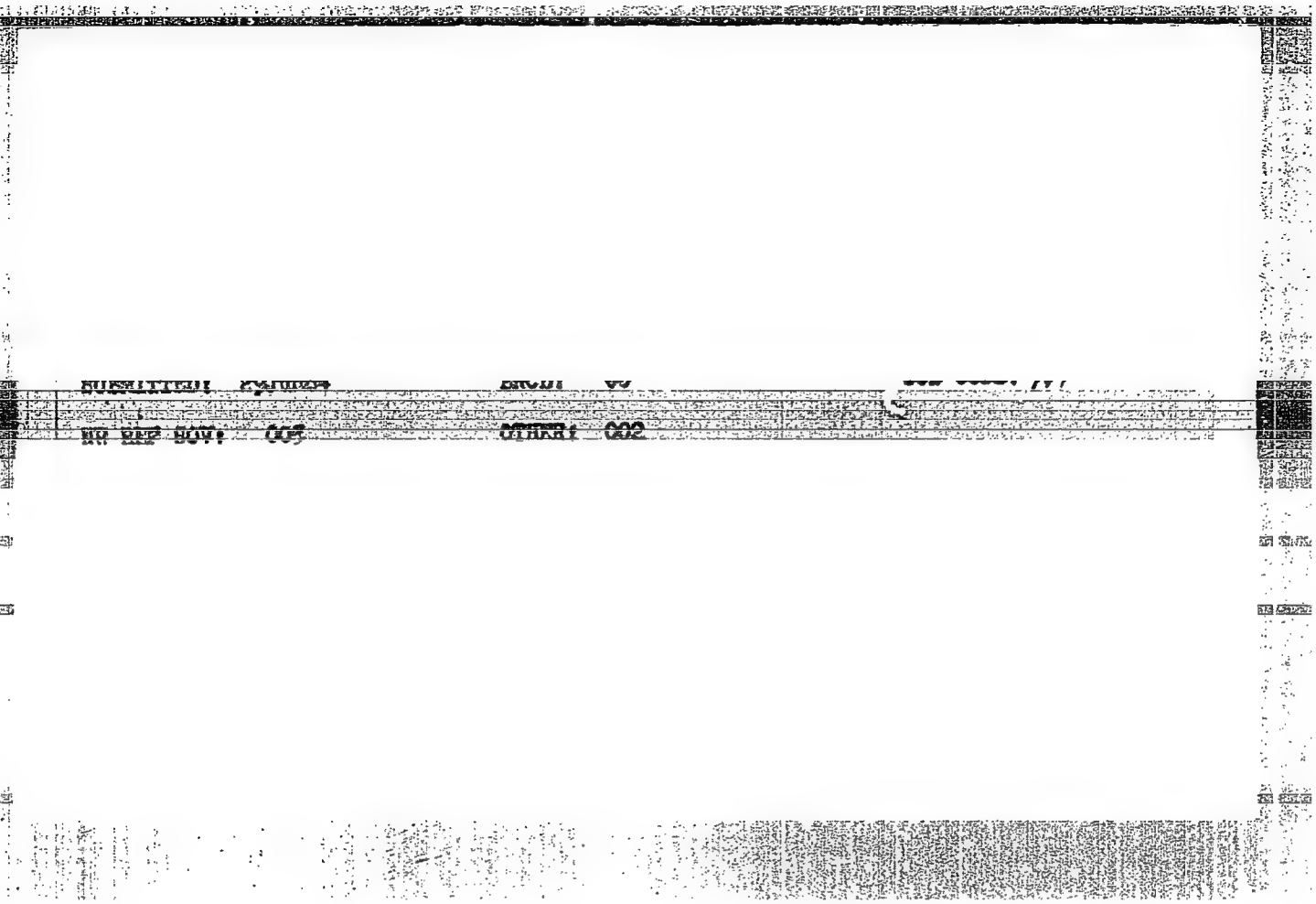
1912-1962

TRUBNIKOV, B.A.; YAVLINSKIY, Yu.N.

Virtual levels for a screened Coulomb potential. Zhur. eksp. i teor. fiz. 48 no.6:1618-1619 Je '65.
(MIRA 18:7)



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001962310016-2"



ACC NR: AP6013493 UR/0120/66/000/002/0055/0059

AUTHOR: Maximov, Yu.S.; Rodionov, Yu.F.; Yavlinskiy, Yu.N.

ORG: Atomic Energy Institute GKAE, Moscow (Institut atomnoy energii GKAE)

TITLE: Semiconductor counters of charged particles, from high resistance n-type conductivity silicone

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1966, 55-59

TOPIC TAGS: alpha particle, alpha particle detector, alpha [illegible] spectroscopy, alpha spectra analyzer sorter/ AI-100-1 analyzer sorter

ABSTRACT: Charged particle energy measuring detectors of high resistance n-type silicone are described. The conductivity impulse of a charged particle arrival, creating electron/hole pairs, is discussed. Preparation of the surface barrier detector is described. Tests showed the detector resolving power to be between 1% and 3% of alpha particle energies around 6 Mev. A semiconductor alpha spectrometer is described, combining a detector with a preamplifier, amplifier and expander. The resulting spectra were registered by the printing analyzer sorter AI-100-1. The spectrometer characteristics remained stable for over a year of operation. The instrument proved to be convenient and fast. Samples of alpha spectra are shown. Authors thank S.A.Baranov for his interest and V.S. Shiryaev for assembly and tuning of the system. Orig. art. has: 7 figures.

SUB CODE: 20/ SUBM DATE: 17Mar65 ORIG REF: 006 OTH REF: 003

Card 1/1 UDC: 539.1.074.5

tion or by the WKB approximation. The authors thank T. D. Zuznetsova for carry-
formulas.

ACC NR: AP 700[illegible] SOURCE CODE: UR/0048/66/030/012/1917/1920

AUTHOR: Yavlinskiy, Yu.N.; Trubnikov, B.A.; Yelesin, V.Y.

ORG: Atomic Energy Institute im. I.V.Kurchatov (Institut atomnoy energii)

TITLE: Neutralization of protons traversing thin metal foils /Report, Twelfth All-Union Conference on the Physical Fundamentals of Cathode Electronics held at Leningrad, 22-26 Oct. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 12, 1966, 1917-1920

TOPIC TAGS: proton beam, recombination, metal film, theoretic physics

ABSTRACT: This paper is devoted to a theoretical explanation of the experimental results of J.A.Phillips (Phys.Rev.,97, No.2, 404 (1955)), who measured the relative numbers of hydrogen atoms and negative ions in approximately 30 to 200 keV proton beams after the beams had traversed metal foils. Phillips' experiments showed that the relative number of atoms and negative ions in the beam was independent of the thickness of the foil and was determined by the last few atomic layers. After a brief discussion it is concluded that "tunnel" recombination cannot have been significant, and it is hypothesized that the recombination took place by triple collisions in the surface layer where the electron density is enhanced by the effect of the electron pressure in the body of the metal. The triple recombination coefficient is calculated in terms of the mobility with the aid of the classical theory of Langevin. The

Card 1/2

ACC NR: AP 7001721

mobility is calculated for two limiting cases of low and high proton velocity, and there result two formulas for the recombination probability as a function of the proton energy, one of which is valid at low energies, and one, at high energies. The experiments were performed at proton energies for which neither of the formulas is valid; the experimental curve lies between the two rather widely separated theoretical curves, however, and this is regarded as qualitative confirmation of the theory. The authors thank A.A.Vedenov and V.G.Tel'kovskiy for discussions. Orig. art. has: 20 formulas and 1 figure.

SUB CODE: 20 SUBM DATE: None ORIG. REF: 006 OTH REF: 004

Card 2/2

ACC NR: AR6035292 SOURCE CODE: UR/0269/66/000/009/0048/0048

AUTHOR: Fialko, Ye. Y.; Moysya, R. I., Mel'nyk, V. I.; Kolomiyets', H. I. -- Kolomiyets', A. R.; Yemel'yanov, I. M.; Shul'ha, A. I.; Yavlins'kyy, A. Ya.

TITLE: Radar set for observing the drift of meteor trails

SOURCE: Ref. zh. Astronomiya, Abs. 9.51.411

REF SOURCE: Visnyk Kyyivs'k. un-tu. Ser. astron., no. 7, 1966, 69-74

TOPIC TAGS: meteor trail, radar antenna, radar meteor observation, train drift

ABSTRACT: A description is given of a radar set designed at the Department of General Radio Engineering of Kiev University and which is intended for measuring the velocity and direction of the drift of ionized trains. The basic parameters of the equipment are as follows: frequency 34.47 mc; transmitter pulse power 100 kw; pulse duration 10 μsec; sending frequency 500 cps; each fifth pulse is doubled; receiver sensitivity $\sim$ 3 μv; receiver passband 600 kc. Identical type wave-duct five-element antennas are used for reception and transmission measurements of the drift velocity radial component is carried out by the pulse-coherent method. The

Card 1/2 UDC: 523.164.85

ACC NR: AR6035202

unit is equipped with a system of noise protection which makes it possible to select reflected signals on the basis of duration, amplitude and code. The equipment was tested in March—May 1964. Article includes a bibliography of 6 titles. V. Lebedinets. [Translation of abstract]

[DW]

SUB CODE: 03, 09/

Card 2/2

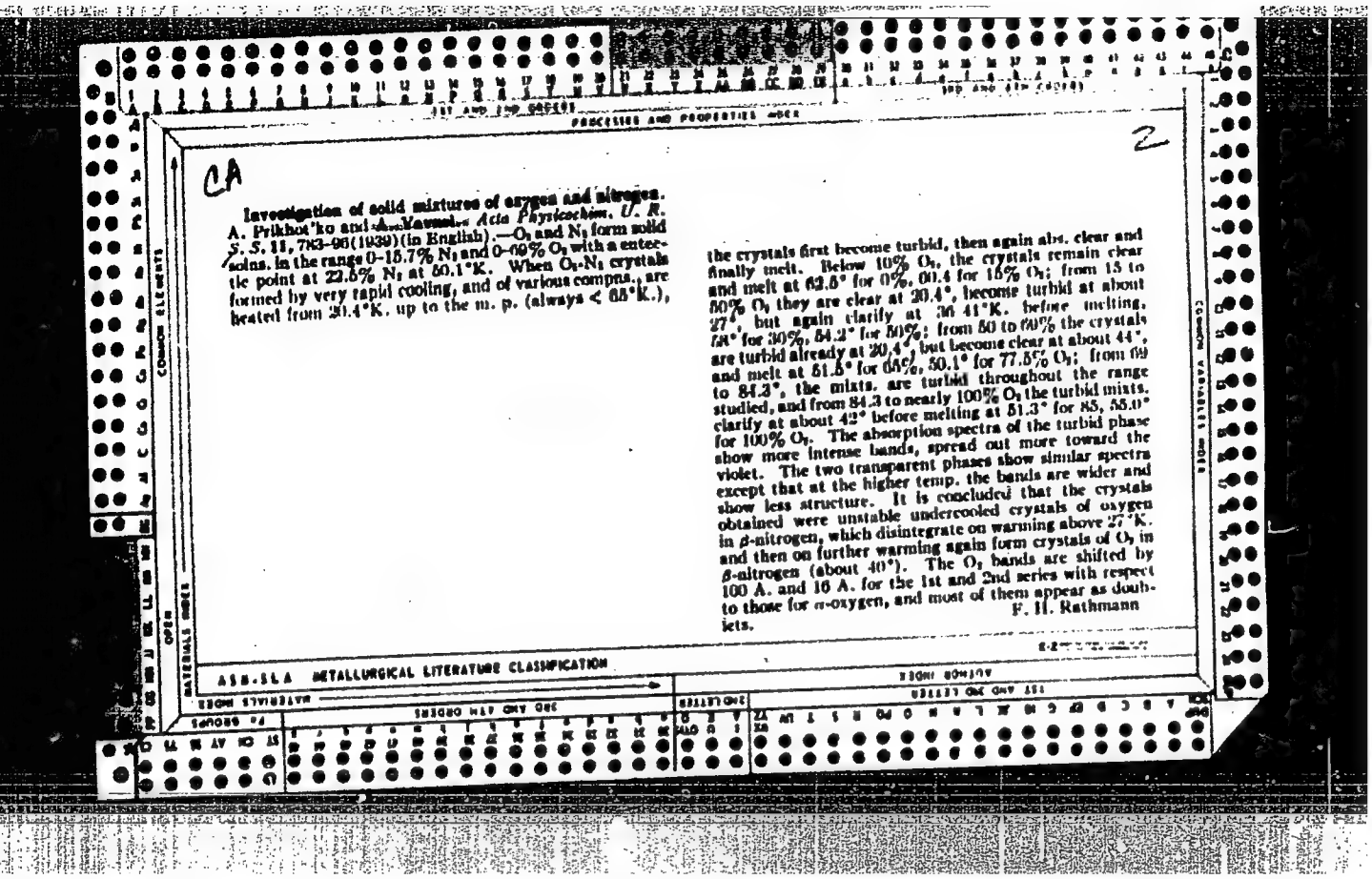
1. YAVNEL', A.

2. USSR (600)

4. Sanitary Engineering

7. Sanitary requirements in planning a village. Sel'.stroi. 2 no. 6, 1947.

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.



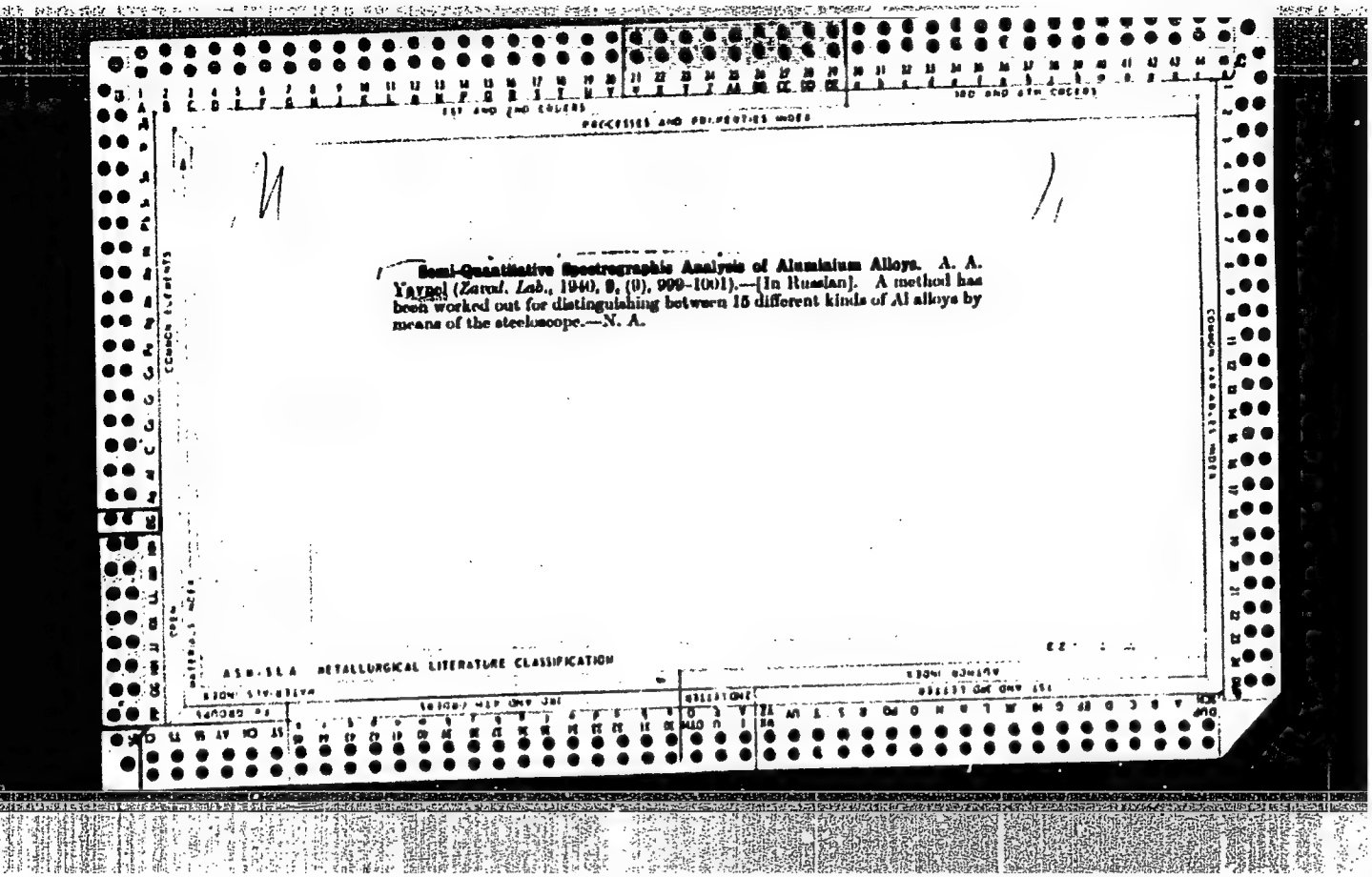
CA

2

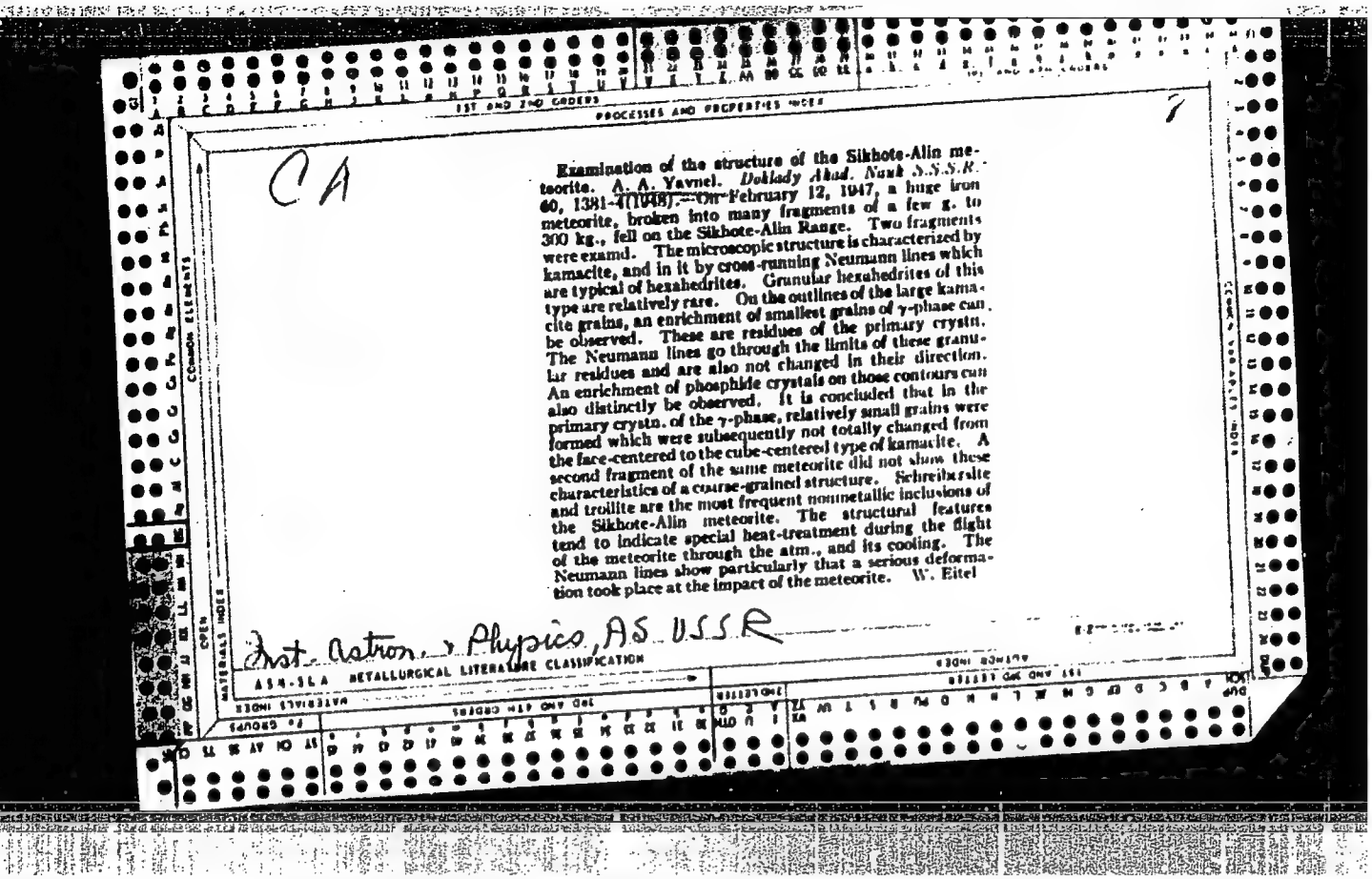
Investigation of solid mixtures of oxygen and nitrogen. A. Prikhot'ko and [illegible]Yavmel.. *Acta Physicochim. U. R. S. S.* 11, 783–96(1939)(in English).—O_2 and N_2 form solid solns. in the range 0–15.7% N_2 and 0–69% O_2 with a eutectic point at 22.6% N_2 at 50.1°K. When O_2-N_2 crystals formed by very rapid cooling, and of various compns., are heated from 20.4°K. up to the m. p. (always < 65°K.), the crystals first become turbid, then again abs. clear and finally melt. Below 10% O_2, the crystals remain clear and melt at 62.5° for 0%, 60.4 for 15% O_2; from 15 to 50% O_2 they are clear at 20.4°, become turbid at about 27°, but again clarify at 36–41°K. before melting, 58° for 30%, 54.2° for 50%; from 50 to 60% the crystals are turbid already at 20.4°, but become clear at about 44°, and melt at 51.5° for 65%, 50.1° for 77.5% O_2; from 69 to 84.3°, the mixts. are turbid throughout the range studied, and from 84.3 to nearly 100% O_2 the turbid mixts. clarify at about 42° before melting at 51.3° for 85, 55.0° for 100% O_2. The absorption spectra of the turbid phase show more intense bands, spread out more toward the violet. The two transparent phases show similar spectra except that at the higher temp. the bands are wider and show less structure. It is concluded that the crystals obtained were unstable undercooled crystals of oxygen in β-nitrogen, which disintegrate on warming above 27°K. and then on further warming again form crystals of O_2 in β-nitrogen (about 40°). The O_2 bands are shifted by 100 A. and 16 A. for the 1st and 2nd series with respect to those for α-oxygen, and most of them appear as doublets.

F. H. Rathmann

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Semi-Quantitative Spectrographic Analysis of Aluminium Alloys. A. A. Yavnel (*Zavod. Lab.*, 1940, **9**, (0), 999–1001).—[In Russian]. A method has been worked out for distinguishing between 15 different kinds of Al alloys by means of the steeloscope.—N. A.



CA

Examination of the structure of the Sikhote-Alin meteorite. A. A. Yavnel. *Doklady Akad. Nauk S.S.S.R.* 60, 1381-4 (1948). On February 12, 1947, a huge iron meteorite, broken into many fragments of a few g. to 300 kg., fell on the Sikhote-Alin Range. Two fragments were examd. The microscopic structure is characterized by kamacite, and in it by cross-running Neumann lines which are typical of hexahedrites. Granular hexahedrites of this type are relatively rare. On the outlines of the large kamacite grains, an enrichment of smallest grains of γ-phase can be observed. These are residues of the primary crystn. The Neumann lines go through the limits of these granular residues and are also not changed in their direction. An enrichment of phosphide crystals on those contours can also distinctly be observed. It is concluded that in the primary crystn. of the γ-phase, relatively small grains were formed which were subsequently not totally changed from the face-centered to the cube-centered type of kamacite. A second fragment of the same meteorite did not show these characteristics of a course-grained structure. Schreibersite and troilite are the most frequent nonmetallic inclusions of the Sikhote-Alin meteorite. The structural features tend to indicate special heat-treatment during the flight of the meteorite through the atm., and its cooling. The Neumann lines show particularly that a serious deformation took place at the impact of the meteorite. W. Eitel

Inst. Astron. & Physics, AS USSR

YAVNEL', A. A.

"Metallographic and Spectrographic Investigation of the Sikhote-Alinskiy Meteorite", Institute of Astronomy and Physics, Academy of Sciences Kazakh SSR, Alma-Ata, 5 pp, 1950.

YAVNEL, A. A.

USSR/Metals - Spectrography Sep/Oct 50

"Atlas of Spectral Lines for the Quartz Spectrograph Within the Range 2,050-2,500 and 3,500-6,900 A," A. K. Kalinin, A. I. Alekseyeva, A. A. Yavnel, L. E. Naymark, Inst of Astr and Phys, Acad Sci Kazakh SSR

"Iz Ak Nauk SSSR,Ser Fiz" Acad Sci Kazakh SSR

Subject atlas, necessary for processing of analysis, consists of 15 charts, giving Fe spectrum in 20-fold enlargement as reference

PA 172T69

YAVNEL, A.A.

Chemical Abst.
Vol. 48 No. 5
Mar. 10, 1954
Analytical Chemistry

Spectrographic analysis of the mineral composition of the Sikhote-Alinsk meteorite. A. A. Yavnel. *Izvest. Akad. Nauk Kazakh. S.S.R.* No. 104, *Ser. Astron. i Fiz.* No. 5, 31–60(1951).—A detailed account of the procedures used for the analysis is given. The Ni and Co are found largely as Fe lattice substituents in kamacite. In schreibercite the high content of Ni is explainable by formation of Fe_3NiP. Cu is distributed among kamacite, schreibercite, and troilite, and is absent in chromite. Ge is found as admixt. in all the minerals. Mg is mainly concd. in the chromite. Cr is found mainly in chromite, but also in troilite (1%) as sulfide. Mn, V, and Ti are concd. in the chromite. Al and Si are low concn. admixts. to all minerals and are found in least amts. in kamacite. G. M. Kosolapoff

YAVNEL, A. A.

Geo Ch

Chemical Abst.
Vol. 48 No. 5
Mar. 10, 1954
Mineralogical and Geological Chemistry

Spectrographic determination of admixtures of noble metals in the Sikhote-Alinsk meteorite. A. A. Yavnel. *Izvest. Akad. Nauk Kazakh. S.S.R. No. 104, Ser. Astron. i Fiz.* No. 5, 67-70(1951).—The content of noble metals (Ag, Au, Pt, Pd, Ru, and Rh) is higher in the meteorite of the Fe type than in the rock meteorites and in the elements of earth's crust. Generally increased Ni content in the meteorite also leads to higher concn. of the noble metals. In descending order of abundance in the meteorite are: Pd, Ag, Ru, Pt, Au, and Rh. G. M. Kozolapoff

YAVNEL', A. A., ALEKSEYEV, A. I., NAYMARK, L. E, and KALININ, S. K.

Atlas Spektral'nykh Liniy (Atlas of Spectral Lines), Moscow, Gostekhizdat, 1952.

KALININ, S.K.; YAVHEL', A.A.; NAYMARK, L.E.

[Tables of arc and spark spectra of iron from 2084 to 6546 A] Atlas dugovogo i iskrovogo spektrov zheleza ot 2084 do 6546 A. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. (MLRA 7:6)

(Iron) (Spectrum analysis--Tables, etc.)

YAVNEL', A. A.

Homogeneity of Chemical Composition of the Sikhote-Alin Iron Meteorite
Meteoritika, No 11, 1954, pp 107-116

For a study of the homogeneity of the chemical composition of meteorites the author utilizes the Sikhote-Alin iron meteorite rain which fell in a tremendous mass of around 100-150 tons. For the study about 20 specimens of various weights were chosen from different locations in the ellipse of scattering. Analysis showed camasite to comprise the principal mass of the meteorite and that all the admixtures (nickel, cobalt, copper, germanium, silicon, magnesium) were contained in identical amounts. (RZhGeol, NO 3, 1955)

SO: Sum. No. 639, 2 Sep 55

USSR/ Miscellaneous - Spectral analysis

Card 1/1 Pub. 43 - 92/97

Authors : Kalinin, S. K.; Yavnel', A. A.; and Neymark, L. E.

Title : Atlas of Fe arc and spark spectra

Periodical : Izv. AN SSSR. Ser. fiz. 18/2, page 297, Mar-Apr 1954

Abstract : Notice is given about the publication in 1953 of an atlas listing all the arc and spark spectra for iron.

Institution : .....

Submitted : .....

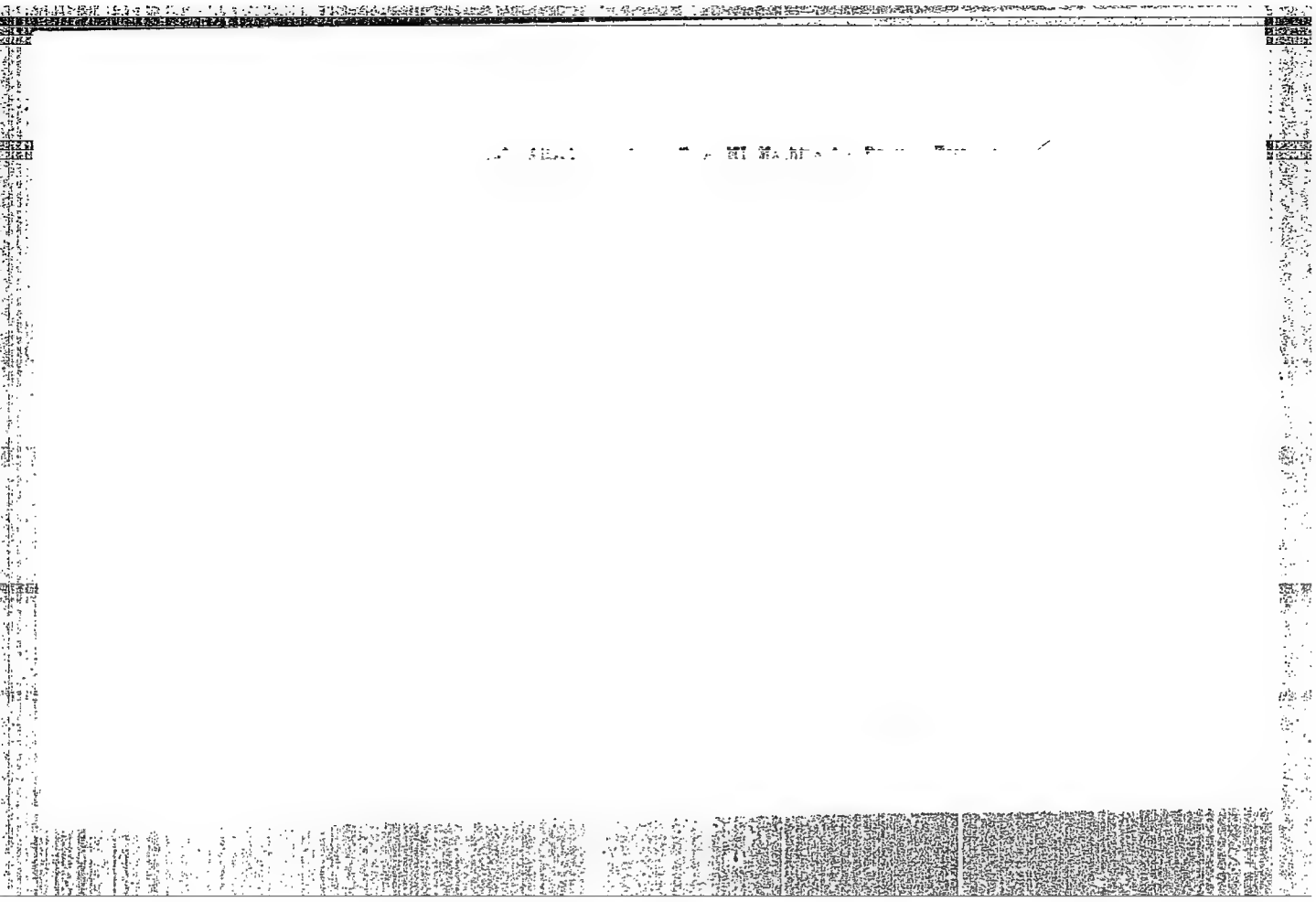
YAVNEL', A.A.

Determination of stresses in fragments of the Sikhote-Alin' meteorite. Izv. Astrofiz.Inst. AN Kazakh.SSR 1 no.1/2:252-262 '55. (MLRA 9:10)

(Meteorites)

YAVNEL', A.A.

Value of the terminal velocity in the fall of the Sikhote-Alin. meteorite. Meteoritika no.13:115-122 '55. (MLRA 9:2)
(Sikhote-Alin range--Meteorites)



USSR/ Astronomy - Meteorites

Card 1/1 Pub. 22 - 15/62

Authors : Yavnel', A. A.

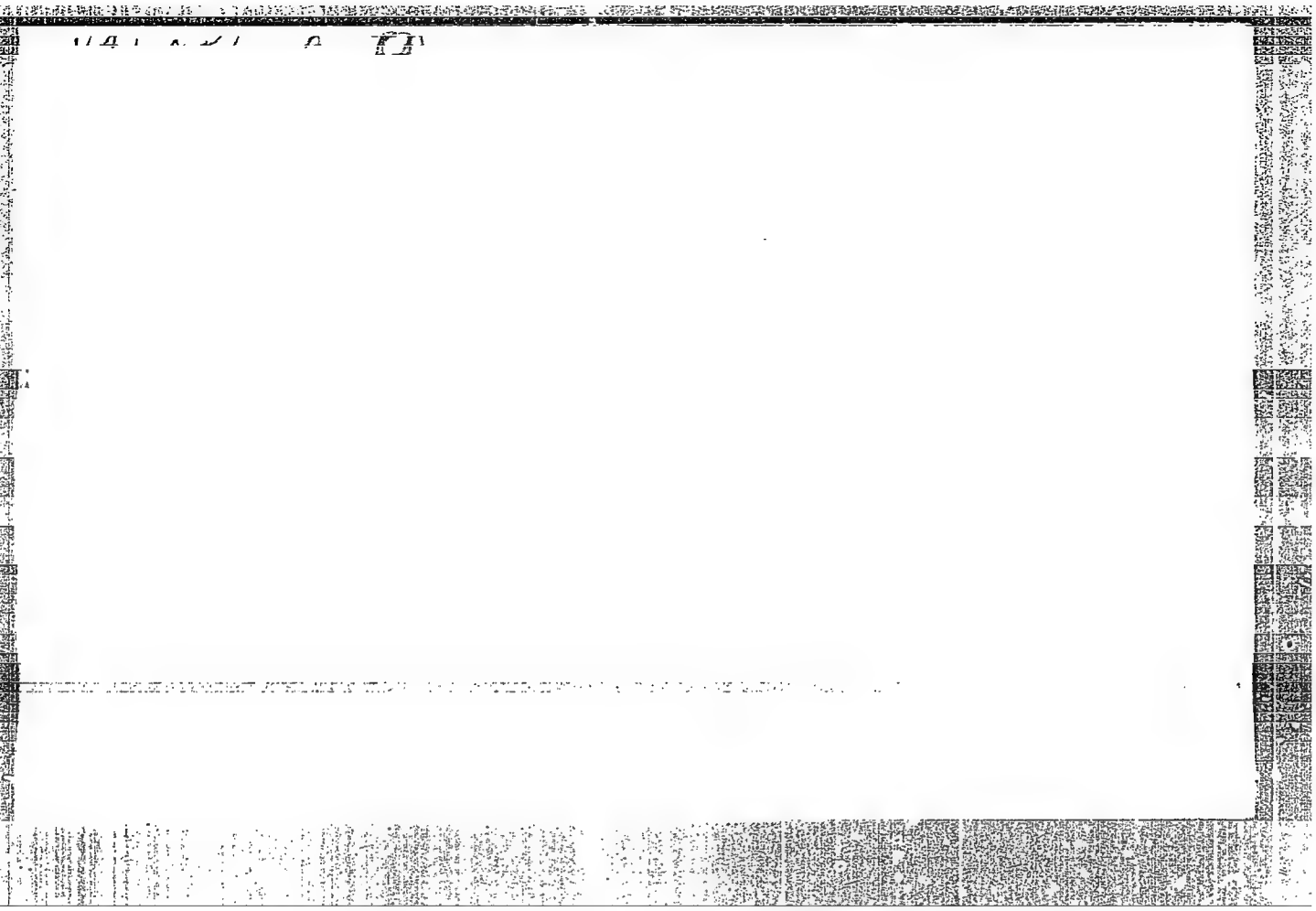
Title : Regularity in the content of ferrous meteorites and the problem of the meteorites' origin

Periodical : Dok. AN SSSR 102/3, 477 - 480, May 21, 1955

Abstract : Some results are presented on the statistical analysis of the regularities in the nickel content in 357 ferrous meteorites. In connection with this the question of the origin of meteorites was discussed. The data for such work was obtained from the G. T. Prior and M. H. Hey's catalogue of meteorites, London, 1953. Eleven references: 1 USSR, 4 Brit, 2 Canad, and 4 USA (1916 - 1953). Table, diagram.

Institution : Acad. of Sc., USSR, The Committee on Meteorites

Presented by: Academician V. G. Fesenkov, January 29, 1955



YAVNEL', A.A.

Inclusions in some minerals of the Sikhote-Alin iron meteorite. Meteoritika no.14:87-91 '56. (MLRA 10:1)
(Sikhote-Alin Range--Meteorites)

YAVNEL', A.A.

On the composition of the Tunguska meteorite [with summary in English].
Geokhimiia AN SSSR no.6:552-556 '57. (MIRA 11:2)

1. Komitet po meteoritam AN SSSR, Moskva.
(Geochemistry) (Meteorites)

Yavnel', A.A.

AUTHOR: Yavnel', A.A. 33-3-18/32

TITLE: Peculiarities in the chemical composition of meteoritic matter and the origin of meteorites. (Osobennosti khimicheskogo sostava meteoritnogo veshchestva i proiskhozhdeniye meteoritov)

PERIODICAL: "Astronomicheskiy Zhurnal" (Journal of Astronomy), 1957, Vol.34, No.3, pp. 445-457 (U.S.S.R.)

ABSTRACT: Sufficient factual material on the composition of meteorites is now available for some generalisations to be made. This may help towards solving the problem of the origin of meteorites.

According to their composition, meteorites consist of two phases: metallic and silicate. Depending on the relation between the two phases, meteorites may be divided into three classes: stone, iron-stone and iron.

Prior (1) stated the following rule: "the less nickel-iron there is in chondrites, the richer they are in nickel and magnesium silicates". On the basis of his examination of available data, Prior also concluded that all stone meteorites were formed from a single magma as a result of progressive oxidation of nickel-iron. In a further paper he states (2) that in any stone meteorite the richer the nickel-iron is in nickel, the richer the magnesium silicates are in oxides of

Card 1/4

Peculiarities in the chemical composition of meteoritic matter and the origin of meteorites. (Cont.)

iron".

The structure of meteorites was also considered by Chervinskiy (4). He formulated the following laws for chondrites: i) the silicate part of an average chondrite consists of 50 molecules % M_2SiO_4 and 50 molecules % $MSiO_3$; ii) the following molecular relations are observed in chondrites: olivine $5Mg_2SiO_4$:$2Fe_2SiO_4$ and pyroxene $5MgSiO_3$:$2FeSiO_3$; iii) the number of atoms per cm^3 in a chondrite is 2.014×10^{23} (at.wt. 24.36); iv) the sulphur content (troilite) of chondrites is independent of the nickel-iron, nickel and oxygen contents.

Other studies were reported by Brown and Patterson (6) and Urey and Craig (9). The conclusions of all the above writers are not always in agreement. For example, Urey and Craig do not agree with Prior that all meteorites originated from a single magma.

The present author investigated all three classes of meteorites: stone, stone-iron, and iron. Some of the results obtained have already been published (10) and (11). Depending on the relation between the two phases (metallic and silicate) all the meteorites can be sub-divided into six sub-classes:

Peculiarities in the chemical composition of meteoritic matter and the origin of meteorites. (Cont.)

achondrites rich in Ca, achondrites poor in Ca, mesosiderites, pallasites and siderites. On the other hand, depending on the composition of the phases themselves (Ni content in metal and FeO content in silicates) the meteorites may be sub-divided into five groups.

If the different groups of meteorites of a given sub-class are compared, a relation is found between the content and the quantitative phase relation, which is called Prior's "group" law. The author concludes that every group of meteorites having a given phase composition was formed from a separate asteroid with laminated structure. The relation between the content and the quantity of each phase in different meteorites (Prior's "primary" law) is explained by the differentiation of matter (at the melting point of the elements) which took place before the formation of the separate asteroids. The oxidation of the elements which followed was the cause of the formation of silicate and metallic phases. In each asteroid, owing to phase differentiation under the influence of gravitational forces, separate layers, corresponding to the different sub-classes of meteorites were formed.

Card 3/4

There are 4 graphs and 12 references, of which 4 are Slavic.

33-3-18/32

Peculiarities in the chemical composition of meteoritic matter and the origin of meteorites. (Cont.)

ASSOCIATION: Meteorite Committee Ac.Sc. U.S.S.R. (Komitet Meteoritam AN SSSR)

SUBMITTED: December 7, 1956

AVAILABLE: Library of Congress

Card 4/4

YAVNEL', A.A.

AUTHOR: Yavnel', A. A. 33-5-11/12

TITLE: Meteoritic Matter from the Point of Impact of the Tungus Meteorite. (Meteoritnoye Veshchestvo S Mesta Padeniya Tungusskogo Meteorita.)

PERIODICAL: Astronomicheskiy Zhurnal, 1957, Vol.34, No.5, pp. 794-796 (USSR).

ABSTRACT: Samples of soil collected in 1927-1930 at the place of fall of the Tungus meteorite have been studied. Visual examination reveals that the meteoritic fraction consists mainly of black crystals of magnetite. In addition there were:- (1) Metallic particles of silvery white colour, a few tenths of a mm in size (Fig. 1). (2) Oxidised metallic particles, mainly flat and angular (Fig. 2), and (3) Black spherical particles apparently of magnetite (Fig. 3), 30 - 60 microns in diameter. Spectrographic analysis has shown that the particles are composed of nickel iron. It is concluded that the Tungus meteorite was an iron one. A measure of the mass of the meteorite was the atmospheric turbidity which occurred in 1908, which, according to Fesenkov (Ref. 7), was due to the fall of the Tungus meteorite. There are 3 figures, no tables, 7 references, 6 of which are Slavic.

Card 1/2

33-5-11/12

Meteoritic Matter from the Point of Impact of the Tungus Meteorite.

SUBMITTED: July 20, 1957.

ASSOCIATION: The Committee for Meteorites of the Academy of Sciences of the USSR. (Komitet po Meteoritam Akademii Nauk SSSR)

AVAILABLE: Library of Congress

Card 2/2

YAVNEL', A.A.

YAVNEL', A.A.

Characteristics of mineral composition and structure of meteoritic matter and the origin of meteorites [with summary in English]. Astron. zhur. 34 no.6:921-931 N-D '57. (MIRA 11:2)

1. Komitet po meteoritam AN SSSR.
(Meteorites)

YAVNEL M.M.
p. 5

PHASE I BOOK EXPLOITATION SOV/3887
SOV/37-M-16

Akademiya nauk SSSR. Komitet po meteoritam

Meteoritika; sbornik statey, vyp. 16 (Meteoritics; Collection of Articles, No. 16) Moscow, 1958. 209 p. Errata slip inserted. Errata slip inserted for No. 15. 1,300 copies printed.

Ed.: V.G.Fesenkov, Academician; Deputy Resp. Ed.: Ye.L.Krinov; Ed. of Publishing House: L.K. Nikolayeva; Tech. Tech. Ed.: T.V. Polyakova.

PURPOSE: This publication is intended for astronomers, geophysicists, astrophysicists, and other specialists concerned with meteoritic phenomena.

COVERAGE: This collection contains 4 articles, a bibliographic index of material on meteorites, and 23 abstracts and reports of papers presented at the Seventh Conference on Meteorites organized by the Committee on Meteorites, Academy of Sciences USSR, held in Moscow, November 14-16, 1956. The reports and articles deal with the origin and composition of meteorites and their relation to other elements in the solar system, the properties of stone meteorites, meteorite

Card 1/6

craters on the earth and the moon, and specific meteorites such as those which fell in the Ukraine and in Mongolia. Several reports are devoted to the Sikhote-Alin' meteoric shower, its trajectory, chemical and mineral composition, structure, and the circumstances attending its fall. A brief note describes the activities of the Center for Meteorite Study, Division of Astronomy, Institute of Physics, Bulgarian Academy of Sciences. No personalities are mentioned.

TABLE OF CONTENTS:

TRANSACTIONS OF THE SEVENTH CONFERENCE ON METEORITES

Meteoritics; Collection of Articles, No. 16 SOV/3887

Card 4/6

ARTICLES

Meteoritics; Collection of Articles, No. 16 SOV/3887

BIBLIOGRAPHY

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Card 6/6

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YAVNEL', A.A.

Tenth International Astronomical Congress in August 1958, in Moscow: Part 1: Symposium on the evolution of meteoritic matter. Geokhimiia no.7:689-691 '58. (MIRA 12:2)
(Meteorites--Congresses)

YAVNEL', A.A.

Classification of meteorites according to their mineralogical composition. Meteoritika no.15:115-135 '58. (MIRA 11:4)
(Meteorites)

YAVNEL', A.A.; D'YAKONOVA, M.I.

Chemical composition of meteorites. Meteoritika no.15:136-151 '58. (MIRA 11:4)
(Meteorites)

YAVNEL', A.A.; D'YAKONOVA, M.I.

Determining various types of iron in stone meteorites. Meteoritika no.15:152-155 '58. (MIRA 11:4)

(Meteorites)

3(1),18(3) SOV/20-123-2-12/50

AUTHORS: Yavnel', A. A., Borovskiy, I. B., Il'in, N. P., Marchukova, I. D.

TITLE: The Investigation of the Composition of the Phases of Meteoritic Iron by the Method of the Local X-Ray Spectrum Analysis (Izucheniye sostava faz meteoritnogo zheleza metodom lokal'nogo rentgenospektral'nogo analiza)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 2, pp 256-258 (USSR)

ABSTRACT: A short report is first given on earlier papers dealing with this subject and on the shortcomings of hitherto employed methods. The authors investigated the phase composition by the method of the X-ray spectrum analysis of the microvolumina. This method was developed a short time ago by I. B. Borovskiy. The object of investigation was the iron meteorite Chebankol found in 1938, which, according to analyses carried out by M. I. Dyakonova, contains 9.03 % Ni and 0.44 % Co. The continuous distribution of iron, nickel, and cobalt with recording of the concentration curves during passage through the "bars" of the α-phase and through the strips of the γ-phase was investigated. The authors determined the composition of the

Card 1/4

phases by which a Widmannstätten (Vidmanshtet) structure is formed. In the case of a fine-grained phase mixture the average composition was determined. A diagram shows the typical result obtained by the first measuring series. A conspicuous feature is the distinctly marked boundary between the phases in form of a "jump" of the content of all important components of the alloy. All measurements distinctly showed an increase of the nickel content and a decrease of the iron and cobalt content extending from the center of the strip of the γ -phase in the direction towards its edge, in which case the extremum value is on the boundary itself. According to the above-mentioned data the crystal was no longer heated after crystallization to such an extent as might cause a change of the composition and ratio of the phases on the boundary by which they are divided (even if the entire system did not regain full equilibrium). Both phases of the meteoritic iron are of inhomogeneous composition in spite of exceedingly slow cooling down, i.e. the system is not fully in equilibrium. The temperatures corresponding to the results obtained differ among one another by about 20 %. Causes that might possibly be

responsible for this non-agreement are mentioned. The data obtained for the variation of nickel concentration might indicate a decrease of the solubility limit of nickel in the α-phase with an increase of the degree of cooling, beginning from a certain temperature value. Also the measurements carried out of the phase composition of such parts of the plessite in which the strips of the γ-phase are subdivided by narrow strips of the α-phase showed a similar distribution of elements. There are 3 figures, 1 table, and 8 references, 1 of which is Soviet.

ASSOCIATION: Komitet po meteoritam Akademii nauk SSSR (Committee for Meteorites of the Academy of Sciences, USSR)
Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute for Metallurgy imeni A. A. Baykov of the Academy of Sciences, USSR)

PHASE I BOOK EXPLOITATION SOV/4045

Kalinin, S.K., A.A. Yavnel', A.I. Alekseyeva, V.L. Marzuvanov, and L.E. Naymark

Atlas spektral'nykh liniy dlya kvartsevogo spektrografa (Atlas of Spectral Lines for the Quartz Spectrograph). Moscow, Gosgeoltekhizdat, 1959. 43 p. 23 charts [in portfolio] Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk Kazakhskoy SSR. Fiziko-tekhnicheskiy institut.

Ed. of Publishing House: V.G. Filatov; Tech. Ed.: O.A. Gurova.

PURPOSE: This work is intended for use in spectral analysis laboratories, scientific institutions, industrial and geological laboratories, and other similar research establishments.

COVERAGE: This atlas of spectral lines, published under the auspices of the Commission on Spectroscopy of the Academy of Sciences, USSR, consists of a booklet and 23 photographic plates. The booklet contains quartz spectrograph spectral lines for 72 elements and tables on the excitation potentials of the lines and the ionization potentials of the elements which have great significance for the selection of analytic lines in quantitative spectral analysis.

Card 1/6

Atlas of Spectral Lines for the Quartz Spectrograph SOV/4045

The tables contain information on the overlapping of analytic lines by the lines of other elements. They can also be used in the spectral analysis of rocks, ores, minerals, soils, metals, and alloys. The atlas was composed by means of the ISP - 22 quartz spectrograph (the new model is the ISP - 28) and the PS - 18 spectroprojector. It is able to reproduce exactly the dimensions and forms of a spectrum obtained in most Soviet laboratories and can also be used with other average-dispersion devices whose parameters resemble closely the ISP - 22 spectrograph (Q - 24, E - 488, etc). The atlas makes it possible to break down the spectrum of various materials into the 72 elements in the whole range of the spectrum recorded by the spectrograph (2050 - 6800 Å). The authors thank S.L. Mandel'shtam, Professor A.K. Rusanov, and S.M. Rayskiy. There are 25 references: 14 Soviet, 6 English, 3 German, 1 French and 1 Italian.

TABLE OF CONTENTS:

Card 2/6

YAVNEL — A — M

PHASE I BOOK EXPLOITATION SOV/3897
SOV/37-M-17

Akademiya nauk SSSR. Komitet po meteoritam

Meteoritika; sbornik statey, vyp. 17; (Meteoritics; Collection of Articles, No. 17) Moscow, 1959. 157 p. Errata slip inserted. 1,300 copies printed.

Ed.: V. G. Fesenkov, Academician; Deputy Resp. Ed.: Ye. L. Krinov; Ed. of Publishing House: I. Ye. Rakhlin; Tech. Ed.: A. P. Guseva.

PURPOSE: This publication is intended for geophysicists, meteorologists, and other scientists working in meteoritics.

COVERAGE: This is a collection of 20 articles on the origin, composition, and structure of meteorites, and the phenomena associated with their flight and fall. The origin of chondrules is examined in support of the theory that meteorites are fragments from collisions between asteroids. A description is given of the physiographic characteristics of achondrites, which are shown to have the same variety and type of changes in their chemical composition as those found in basic and ultrabasic terrestrial rocks. Results of an experimental study

Card 1/5

conducted by A. S. Predvoditelev, Corresponding Member of the Academy of Sciences USSR, on creep fusion in solids subjected to hot high-density ultrasonic streams are presented, and spectrographic analyses of indochinites, moldavites, and rizalites to determine their cosmic or terrestrial origin are evaluated. There is an investigation of the relationship of zodiacal light and counterglow to meteoritic matter in interplanetary space, and a description of a centrifugal method used in separating maskelinite from meteoritic samples. The Tunguska, Zvonkovoye, Manych, Norton County, and Kon'ovo (Bulgaria) meteorites are discussed in detail, and a list of the meteorites known to have fallen in China is given. References accompany most of the articles.

TABLE OF CONTENTS:

Meteoritics; Collection of Articles, No. 17 SOV/3897

Card 4/5

AVAILABLE: Library of Congress

Card 5/5

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YAVNEL', A.A.; BOROVSKIY, I.B.; IL'IN, N.P.; MARCHUKOVA, I.D.

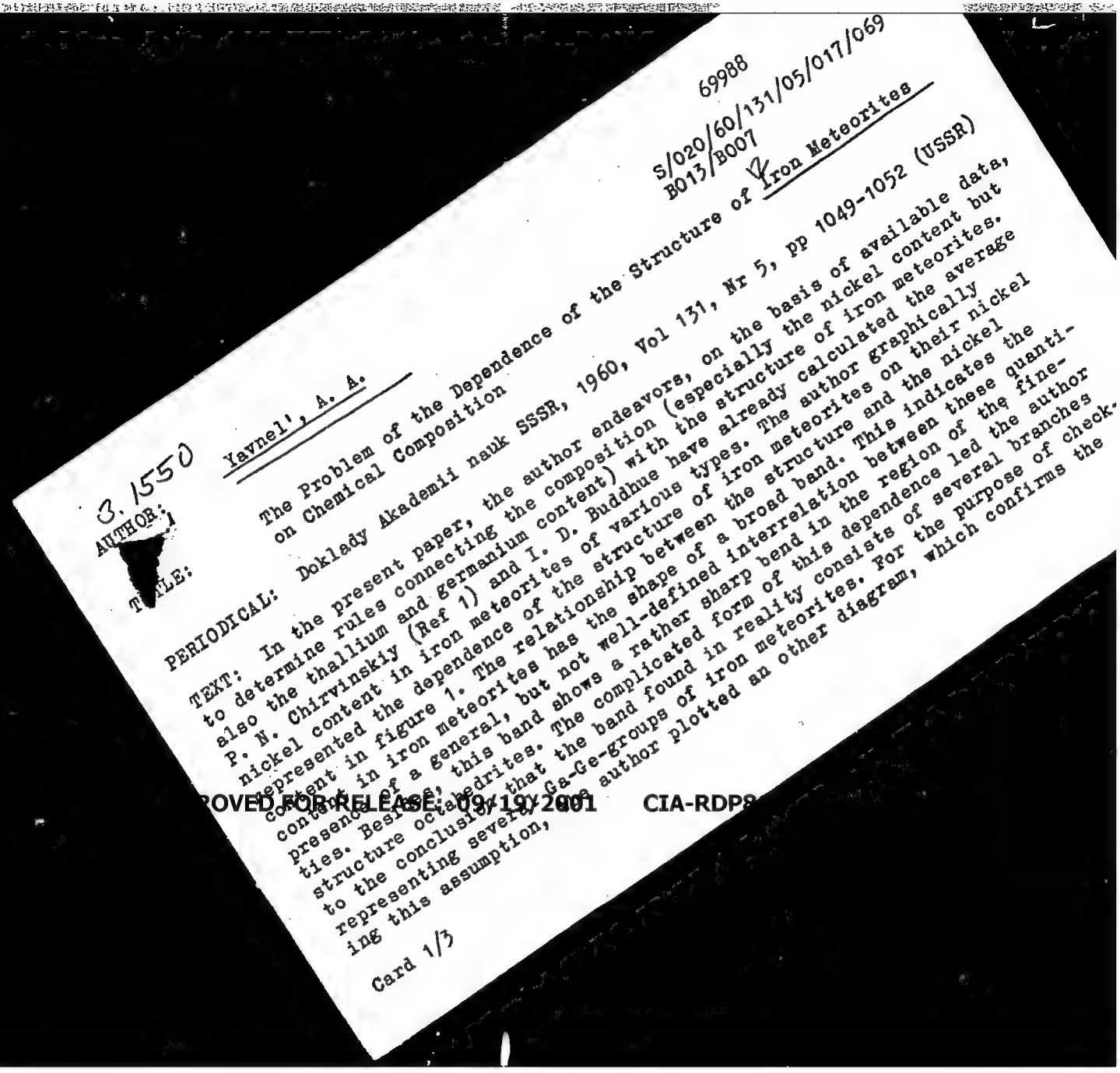
Using the method of local X-ray spectral analysis for determining the composition of phases in meteorite iron.
Meteoritika no.18:77 '60. (MIRA 13:5)
(Meteorites) (X-ray spectroscopy)

This collection of 26 articles on problems in meteoritic includes the Transactions of the Eighth Meteoritic Conference which took place in Moscow, June 3-5 1958. An introductory article reviews recent progress in the field, particularly in the matter of determining the age of meteorites. Individual articles discuss the fall, physical and chemical properties, and age of meteorites. The danger presented by meteors to artificial earth satellites is discussed.

YAVNEL', A.A.

Some problems in the chemistry of meteorites. Meteoritika no.19:12-25 '60. (MIRA 13:11)

(Meteorites)



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3.1550

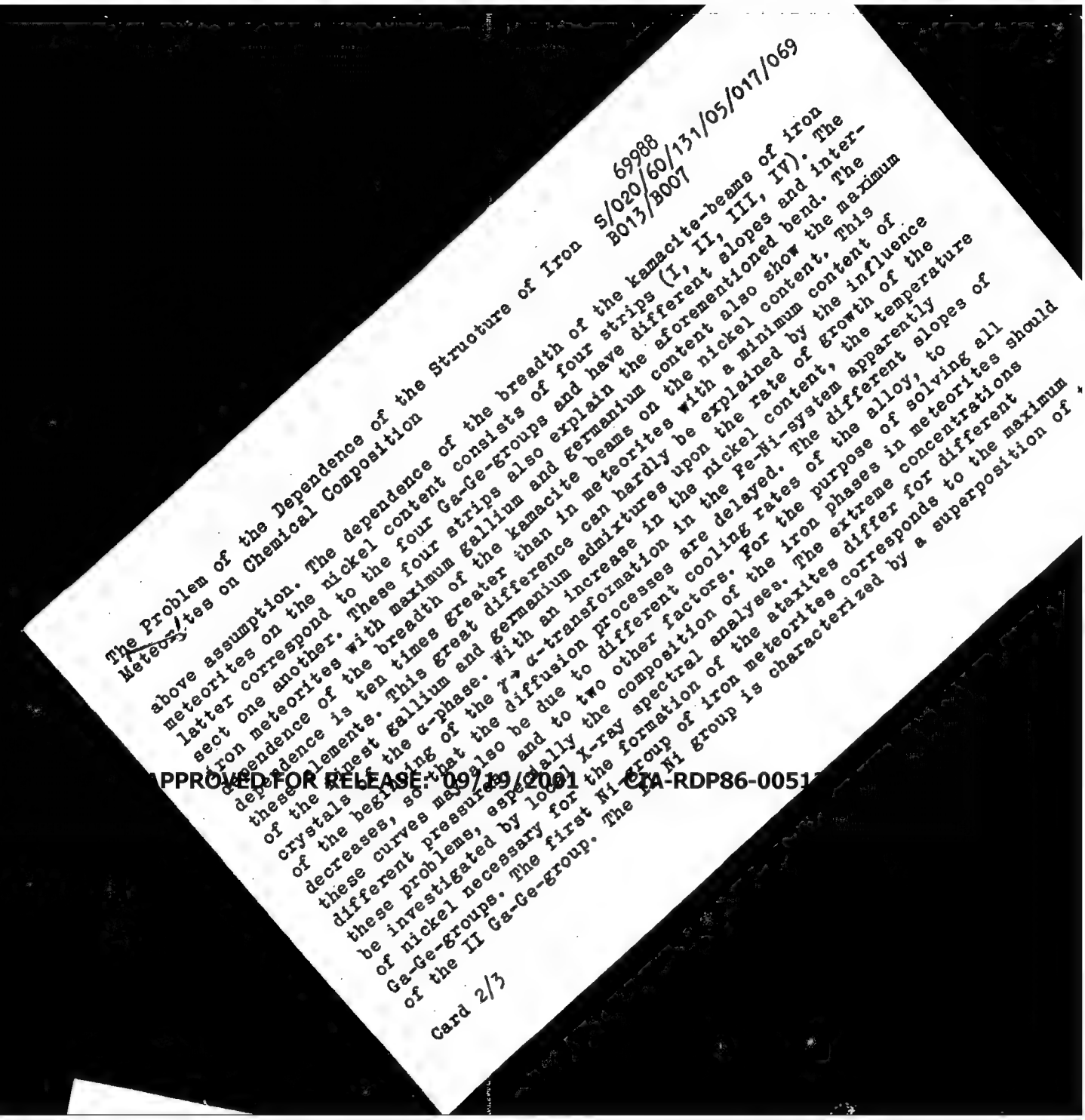
AUTHOR: Yavnel', A. A.

TITLE: The Problem of the Dependence of the Structure of Iron Meteorites on Chemical Composition

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 5, pp 1049-1052 (USSR)

TEXT: In the present paper, the author endeavors, on the basis of available data, to determine rules connecting the composition (especially the nickel content but also the thallium and germanium content) with the structure of iron meteorites. P. N. Chirvinskiy (Ref 1) and I. D. Buddhue have already calculated the average nickel content in iron meteorites of various types. The author graphically represented the dependence of the structure of iron meteorites on their nickel content in figure 1. The relationship between the structure and the nickel content of a general, but not well-defined interrelation between these quantities. Besides, this band shows a rather sharp bend in the region of the fine-structure octahedrites. The complicated form of this dependence led the author to the conclusion that the band found in reality consists of several branches representing several Ga-Ge-groups of iron meteorites. For the purpose of checking this assumption, the author plotted an other diagram, which confirms the

Card 1/3



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The Problem of the Dependence of the Structure of Iron Meteorites on Chemical Composition

above assumption. The dependence of the breadth of the kamacite-beams of iron meteorites on the nickel content consists of four strips (I, II, III, IV). The latter correspond to the four Ga-Ge-groups and have different slopes and intersect one another. These four strips also explain the aforementioned bend. The iron meteorites with maximum gallium and germanium content also show the maximum dependence of the breadth of the kamacite beams on the nickel content. This dependence is ten times greater than in meteorites with a minimum content of these elements. This great difference can hardly be explained by the influence of the purest gallium and germanium admixtures upon the rate of growth of the crystals of the α-phase. With an increase in the nickel content, the temperature of the beginning of the γ → α-transformation in the Fe-Ni-system apparently decreases, so that the diffusion processes are delayed. The different slopes of these curves may also be due to different cooling rates of the alloy, to different pressure and to two other factors. For the purpose of solving all these problems, especially the composition of the iron phases in meteorites be investigated by local X-ray spectral analyses. The extreme concentrations of nickel necessary for the formation of the ataxites differ for different Ga-Ge-groups. The first Ni-group of iron meteorites corresponds to the maximum of the II Ga-Ge-group. The I Ni group is characterized by a superposition of

Card 2/3

The Problem of the Dependence of the Structure of Iron Meteorites on Chemical Composition

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maxima of the III, IV, and partly of the I Ga-Ge-group. The subdivision of iron meteorite with respect to their structure only insufficiently considers the rules governing their composition. There are 2 figures and 9 references, 4 of which are Soviet.

ASSOCIATION: Komitet po meteoritam Akademii nauk SSSR (Committee for Meteorites of the Academy of Sciences of the USSR)

PRESENTED: December 25, 1959, by V. G. Fesenkov, Academician

SUBMITTED: December 25, 1959

Card 3/3

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S/020/60/131/05/017/069
B013/B007

AUTHOR: Yavnel', A. A.

TITLE: The Problem of the Dependence of the Structure of Iron Meteorites on Chemical Composition

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 5, pp 1049-1052 (USSR)

TEXT: In the present paper, the author endeavors, on the basis of available data, to determine rules connecting the composition (especially the nickel content but also the thallium and germanium content) with the structure of iron meteorites. P. N. Chirvinskiy (Ref 1) and I. D. Buddhue have already calculated the average nickel content in iron meteorites of various types. The author graphically represented the dependence of the structure of iron meteorites on their nickel content in figure 1. The relationship between the structure and the nickel content in iron meteorites has the shape of a broad band. This indicates the presence of a general, but not well-defined interrelation between these quantities. Besides, this band shows a rather sharp bend in the region of the fine-structure octahedrites. The complicated form of this dependence led the author to the conclusion that the band found in reality consists of several branches representing several Ga-Ge-groups of iron meteorites. For the purpose of checking this assumption, the author plotted an other diagram, which confirms the

Card 1/3

The Problem of the Dependence of the Structure of Iron Meteorites on Chemical Composition

above assumption. The dependence of the breadth of the kamacite-beams of iron meteorites on the nickel content consists of four strips (I, II, III, IV). The latter correspond to the four Ga-Ge-groups and have different slopes and intersect one another. These four strips also explain the aforementioned bend. The iron meteorites with maximum gallium and germanium content also show the maximum dependence of the breadth of the kamacite beams on the nickel content. This dependence is ten times greater than in meteorites with a minimum content of these elements. This great difference can hardly be explained by the influence of the finest gallium and germanium admixtures upon the rate of growth of the crystals of the α-phase. With an increase in the nickel content, the temperature of the beginning of the $\gamma \rightarrow \alpha$-transformation in the Fe-Ni-system apparently decreases, so that the diffusion processes are delayed. The different slopes of these curves may also be due to different cooling rates of the alloy, to different pressures, and to two other factors. For the purpose of solving all these problems, especially the composition of the iron phases in meteorites should be investigated by local X-ray spectral analyses. The extreme concentrations of nickel necessary for the formation of the ataxites differ for different Ga-Ge-groups. The first Ni-group of iron meteorites corresponds to the maximum of the II Ga-Ge-group. The II Ni group is characterized by a superposition of the

The Problem of the Dependence of the Structure of Iron Meteorites on Chemical Composition

S/020/60/131/05/017/069
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maxima of the III, IV, and partly of the I Ga-Ge-group. The subdivision of iron meteorite with respect to their structure only insufficiently considers the rules governing their composition. There are 2 figures and 9 references, 4 of which are Soviet.

ASSOCIATION: Komitet po meteoritam Akademii nauk SSSR (Committee for Meteorites of the Academy of Sciences of the USSR)

PRESENTED: December 25, 1959, by V. G. Fesenkov, Academician

SUBMITTED: December 25, 1959

Card 3/3

S/035/61/000/012/032/043
A001/A101

AUTHOR: Yavnel', A.A.

TITLE: On dependence of the structure of iron meteorites on chemical composition and crystallization conditions

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 12, 1961, 77-78, abstract 12A636 (V sb. "Meteoritika", no. 20, Moscow, 1961, 114-120)

TEXT: Differences, discovered by the author (RZhAstr, 1961, 1A467), in dependence of the width of kamacite bands in iron meteorites of individual Ga-Ge groups on the nickel content can be explained by unequal conditions in crystallization of meteoritic iron. To clear up differences in the cooling rate of meteoritic iron and in the final temperature of its slow cooling, the author employs the method of local X-ray spectral analysis of phase composition. The results of investigation by this method of three iron meteorites with the same nickel content, but belonging to different Ga-Ge groups, confirm a difference in crystallization conditions of these meteorites, which reflected on their phase composition and structure. There are 11 references.

[Abstracter's note: Complete translation]

A. Yavnel'

Card 1/1

YAVNEL, A. A.

YANVEL', A.A.

Concerning the dependence of the structure of the "iron-meteo-ites" upo- the chemical composition and the conditions of crystallization.

110

"METEORITKA" ("Meteorites-Studies) Issue no. 20 - 1961, sponsored by the "Committee on Meteorites" of the Soviet Academy of Sciences - Moscow - 1961, 208 pages, and containing Collected Works("Trudy") of the "9th Meteorite Conference Organized by the Committee on Meteorites of the Soviet Academy of Sciences" and Held in KIEV on 2-4 June 1960.

YAVNEL', A.A.

Correlation of various forms of iron in chondrites. Meteoritika no.22:74-82 '62. (MIRA 15:8)

(Meteorites)

YAVNEL', A.A.

Composition, structure and crystallization conditions of iron meteorites. Meteoritika no.22:83-93 '62. (MIRA 15:8)
(Meteorites)

YAVNEL', A.A.

Genetic regularities in the chemical composition of chondrites. Meteoritika no.23:36-41 '63. (MIRA 16:9)
(Meteorites)

YAVNEL', A.A.

Meteorites and micro-organisms; an unfounded hypothesis.
Priroda 52 no.12:92 '63. (MIRA 17:3)

1. Komitet po meteoritam AN SSSR, Moskva.

ACCESSION NR: AP4043928 S/0026/64/000/008/0112/0114

AUTHOR: Yavnel', A. A. (Candidate of physico-mathematical sciences)

TITLE: Eleventh Meteorite Conference [Moscow, 26-30 May 1964]

SOURCE: Priroda, no. 8, 1964, 112-114

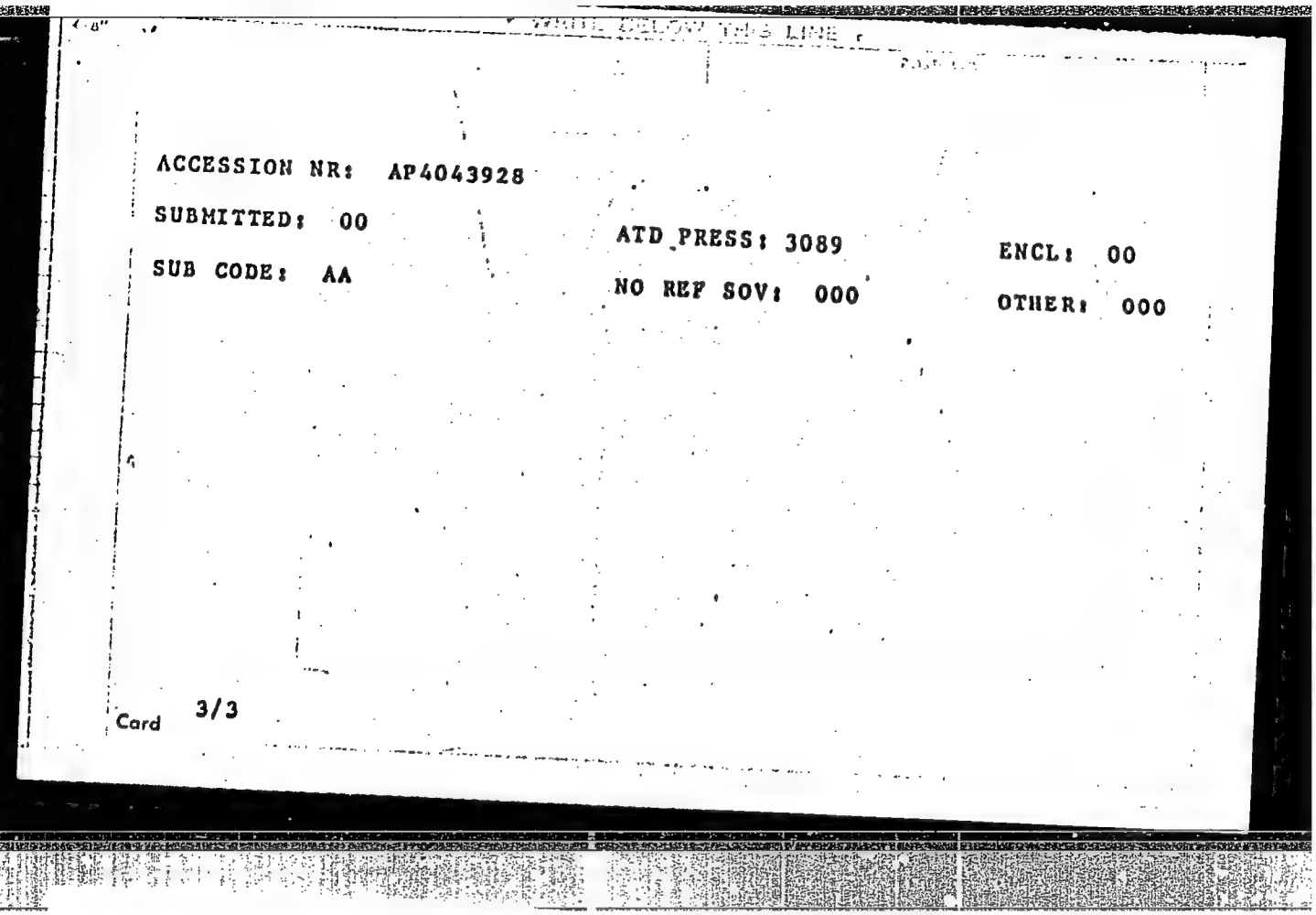
TOPIC TAGS: meteorite, chondrite, meteorite fragmentation, Tunguska meteorite, meteoritics, chondrule, carbonaceous chondrite, meteorite conference

ABSTRACT: Recent progress in meteoritics was discussed at the 11th Meteorite Conference, sponsored by the Komitet po meteoritam Akademii nauk SSSR (Committee on Meteorites of the Academy of Sciences SSSR), held in Moscow 26—30 May 1964. In his report on the origin of meteorites, B. Yu. Levin suggested that chondrules are formed during the heating of the solid meteorite matter. Reporting on the chemical composition and structure of meteorites, A. A. Yavnel' pointed out a close relationship between the loss of iron and the oxidation-reduction processes in the formation of chondrites. D. P. Grigor'yev maintains that the primary crystallization of minerals in chondrules

Card 1/3

occurred by spherulitic growth, while L. G. Kvash has concluded that chondrules crystallized from a silicate fusion. G. P. Vdovy*kin noted that the organic matter of carbonaceous chondrites is of abiogenic origin and was formed simultaneously with the mineral matter of the parent meteorite bodies. A. A. Imshenetskiy and S. S. Aby*zov suggest the possibility of life being transported by meteorites, but note that to date microorganisms detected in meteorites have been traced to a terrestrial origin. G. I. Pokrovskiy found that as the result of the fragmentation of a meteorite body in the atmosphere a shock wave arises that corresponds to a point explosion with an energy comprising most of the initial kinetic energy of the body. Questions dealing with the interaction of shock waves in the fall and explosion of meteorite bodies were discussed by M. A. Tsikulin, while K. P. Stanyukovich expounded the theory of crater-forming meteorites. Several reports dealt with aspects of the Tunguska meteorite fall.

ASSOCIATION: Komitet po meteoritam AN SSSR, Moscow (Committee on Meteorites, AN SSSR)



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[illegible] metallic phase of iron meteorites and [illegible]

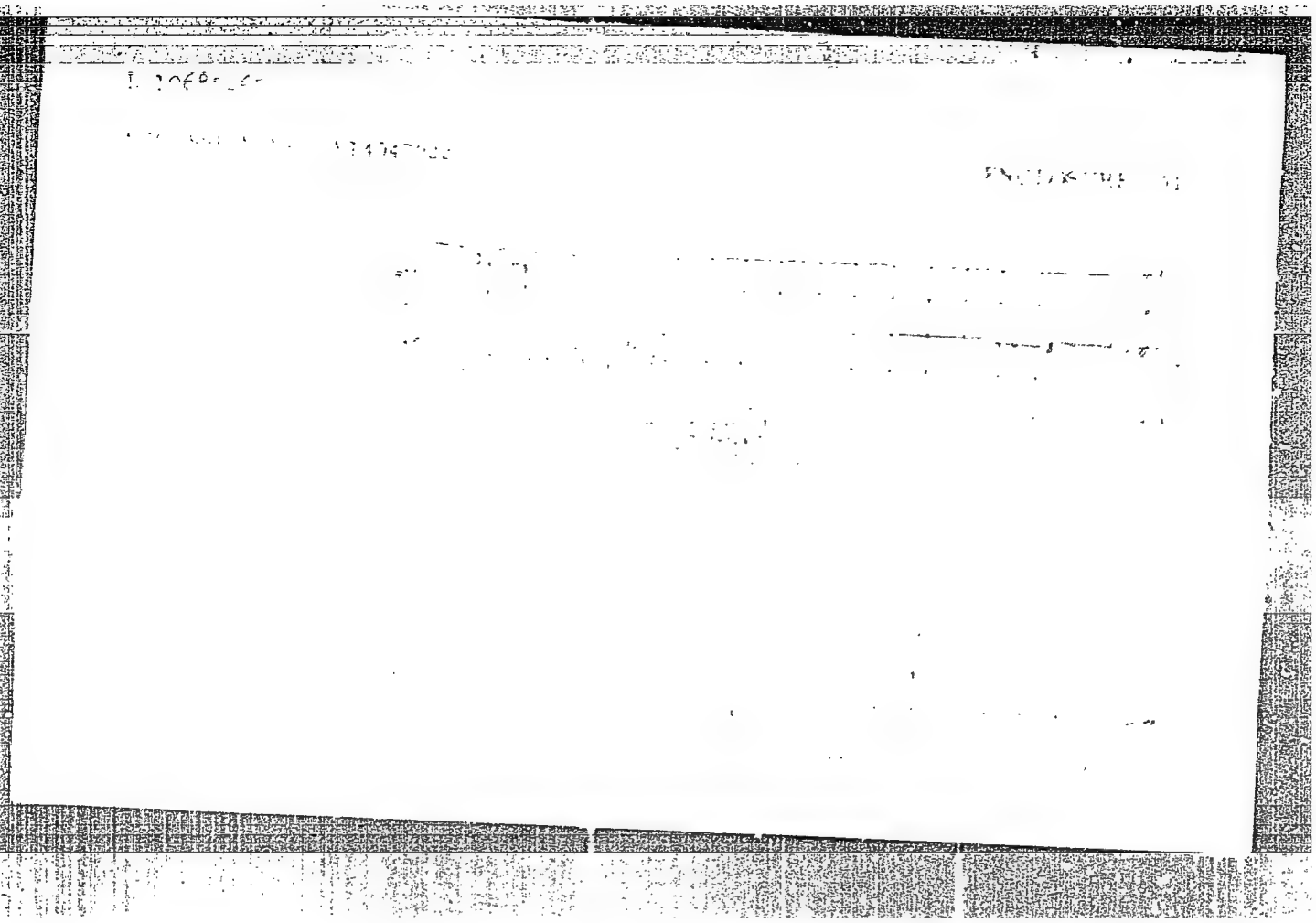
[illegible] Meteoritika, no. 25, 264, 75-85

TOPIC TAGS: chondrite, iron meteorite, meteorite, meteorite differentiation

[illegible] differentiation [illegible] change in composition of meteor matter

shown on the graph by the annotation TR. This same figure shows the distribution of the

[illegible] committee on Water [illegible]

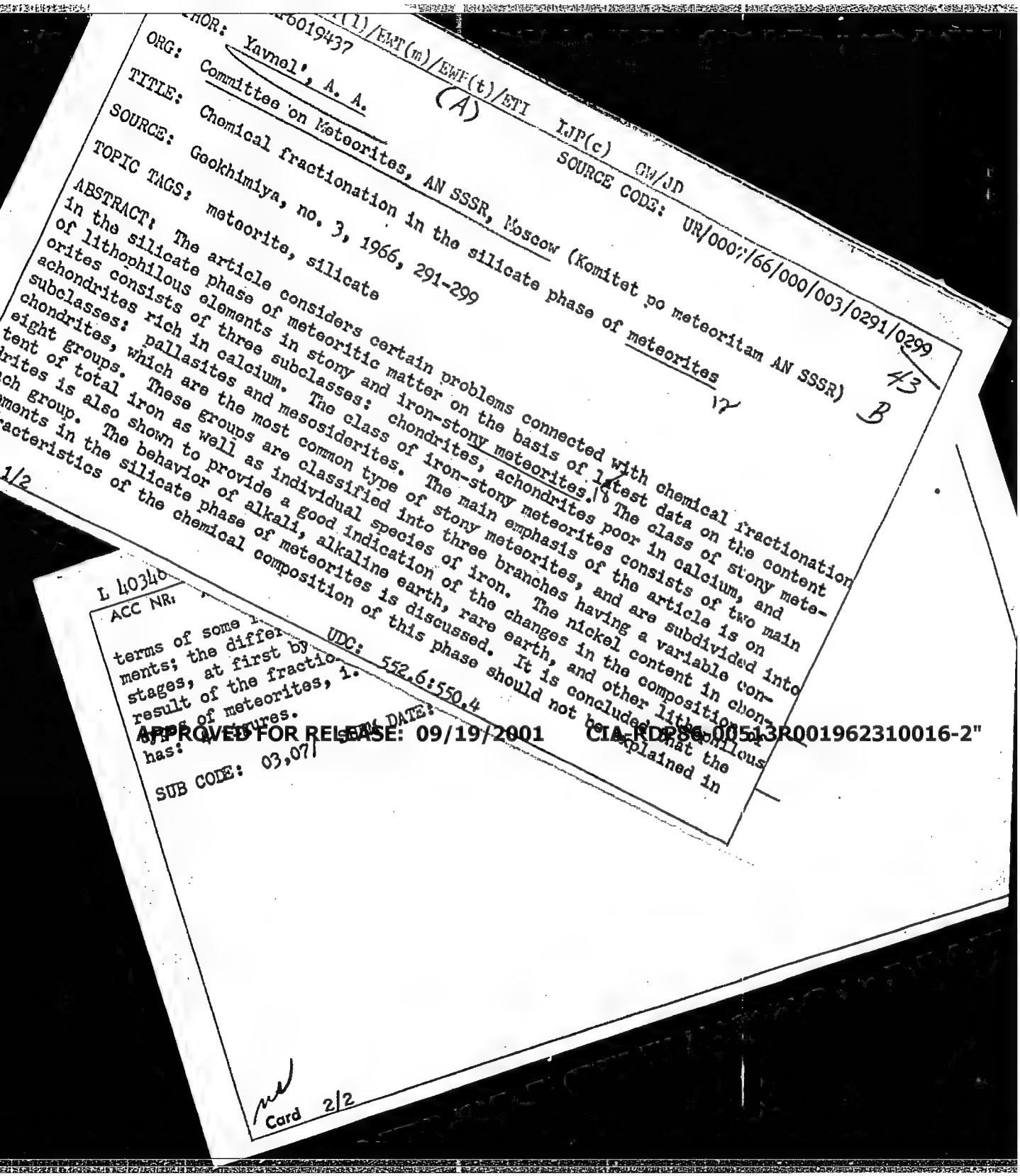


YAVNEL', A.A.; VOROB'YEV, G.G.

Bibliographic system for meteorites on manually operated punch cards. Meteoritika no.24:180-193 '64. (MIRA 17:5)

YAVNEL', A.A.

Abundance of elements in the metal phase of iron meteorites and in chondrites. Meteoritika no.25 75-89 '64. (MIRA 17:9)



L 40340-66 EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) GW/JD
ACC NR: AT6019437 SOURCE CODE: UR/0007/66/000/003/0291/0299

AUTHOR: Yavnel', A. A. (A) 43

ORG: Committee on Meteorites, AN SSSR, Moscow (Komitet po meteoritam AN SSSR) B

TITLE: Chemical fractionation in the silicate phase of meteorites 17

SOURCE: Geokhimiya, no. 3, 1966, 291-299

TOPIC TAGS: meteorite, silicate

ABSTRACT: The article considers certain problems connected with chemical fractionation in the silicate phase of meteoritic matter on the basis of latest data on the content of lithophilous elements in stony and iron-stony meteorites. The class of stony meteorites consists of two main orites consists of three subclasses: chondrites, achondrites poor in calcium, and achondrites rich in calcium. The class of iron-stony meteorites consists of two main subclasses: pallasites and mesosiderites. The main emphasis of the article is on chondrites, which are the most common type of stony meteorites, and are subdivided into eight groups. These groups are classified into three branches having a variable content of total iron as well as individual species of iron. The nickel content in chondrites is also shown to provide a good indication of the changes in the composition of ch group. The behavior of alkali, alkaline earth, rare earth, and other lithophilous ments in the silicate phase of meteorites is discussed. It is concluded that the acteristics of the chemical composition of this phase should not be explained in

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ACC NR: AP6019437 (A) SOURCE CODE: UR/0007/66/000/003/0291/0299

43

AUTHOR: Yavnel', A. A.

ORG: Committee on Meteorites, AN SSSR, Moscow (Komitet po meteoritam AN SSSR) B

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ACC NR: AP6019437

terms of some fractionation process such as, for example, the loss of volatile elements; the differentiation of meteoritic matter is thought to have occurred in several stages, at first by separation into the main groups of chondrites, and then, as a result of the fractionation of the composition of these groups, by formation of other types of meteorites, i. e., achondrites, iron-stony and iron meteorites. Orig. art. has: 4 figures.

SUB CODE: 03,07/ SUBM DATE: 14Aug64/ ORIG REF: 008/ OTH REF: 068

Card 2/2

YAVNEL', A. B.

Yavnel', A. B. "A dynamometer for stumps of the lower extremity," Sbornik trudov Nauch.-issled. in-ta ortopedii, travmatologii i protezirovaniya (M-vo zdravookhraneniya Uz SSR), Vol. 1, 1948, p. 229-32

SO: U-4934, 29 Oct. 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

YAVNEL', A. B.

28013. YAVNEL', A. B. -- Kostno-plasticheskiye amputatsii po biru. Trusy pervoy nauch. Mezhresp. Konf-tsii po lecheniyu invalidov otechestv. Voyny v sred. Azii. Tashkent, 1949, S. 275-82.

SO: Letopis' Zhurnal'nykh Statey. Vol. 37, 1949.

YAVNEL', A. YU.

Russia - Sanitary affairs

Preventive sanitary supervision in planning of collective farm settlements.
Gig. i san. no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

1. YAVNEL', A. Yu

2. USSR (600)

4. Farm Buildings

7. Type of buildings for farmsteads of collective farm members, Gig. i san. no. 3, 21, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

YAVNEL'.A.Yu.

[Methods for making a sanitary and hygienic study in planning and organizing public services in collective farm villages] Metodika sanitarno-gigienicheskogo izycheniia planirovki i blagoustroistva kolkhoznykh sel. Moskva, Medgiz, 1955. 86 p. (Collective farms--Hygienic aspects) (MLRA 8:9)

YAVNEL', A.Yu., kandidat meditsinskikh nauk.

Planning a camp for fieldworkers. Zdorov'e 1 no.5:29-30 My '55.
(MLRA 9:3)

(FARM BUILDINGS)

YAVNEL, A. YU.

DEMEZER, A.A.; DZYUBA, M.L.; BLINOV, L.F., kandidat sel'skokhozyaystvennykh nauk; BOLDYREV, N.I., kandidat pedagogicheskikh nauk; GAY-GULINA, Z.S, GRUDEV, D.I., kandidat sel'skokhozyaystvennykh nauk; DUBROV, Ya.G., professor; KOVALENKO, V.D., ;KRYSINA, O.I.; KURKO, V.I.; LEVI M.F., kandidat sel'skokhozyaystvennykh nauk; MORDKOVICH, M.S.; POPOV, I.P. kandidat biologicheskikh nauk;SAGALOVICH, Ye.N., agronom; SILIN, V.N, zootekhnik; STRUYANSKIY, I.L., vrach; SUSHKOVA-LYAKHOVICH, M.L., kandidat meditsinskikh nauk; SHAPOVALOV, Ya.Ya., kandidat sel'skokhozyaystvennykh nau; SHENDERETSKIY, E.I., kandidat sel'skokhozyaystvennykh nauk; YAVNEL', A.Yu., kandidat meditsinskikh nauk; RODINA, P.I., redaktor; YUROVITSKIY, Ye.I., redaktor;PEVZNER, V.I., tekhnicheskiy redaktor.

[Home economics] Domovodstvo. Moskva, Gos.izd-vo sel'khoz.lit-ry. 1956. 479 p. (MLRA 10:5)

(Home economics)

YAVNEL', A.Yu.

"Comfortable modern village" and "Good water for the collective farm village" V.N.Riabov. Reviewed by A.IU. IAvnel'. Gig. i san. 21 no.4: 59-60 Ap '56. (MLRA 9:7)

(PUBLIC HEALTH, RURAL) (RIABOV, V.N.)
(WATER SUPPLY, RURAL)